

# Three new species of *Atkinsoniella* (Arthropoda, Insecta, Hemiptera, Cicadellidae, Cicadellinae) from China, with an updated checklist to the known species worldwide

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## Abstract

The sharpshooter genus *Atkinsoniella* Distant, 1908 includes 99 valid species worldwide. Here, three new species from China are described and illustrated: *Atkinsoniella stenopyga*, *A. wangi*, and *A. yingjiangensis* **spp. nov.** An updated checklist of the known *Atkinsoniella* species worldwide based on the data of previous literature and studied materials is also provided. All the type specimens of three new species are deposited at the Institute of Entomology, Guizhou University, Guiyang, China.

## Keywords

Auchenorrhyncha, leafhopper, morphology, taxonomy, Tibet, Yunnan

## Introduction

The genus *Atkinsoniella* is a relatively large genus of the subfamily Cicadellinae. It was established by Distant (1908) with two new species: *A. decisa* (type species) and *A. maculata*. Young (1986) systematically revised *Atkinsoniella*, proposed 15 new combinations and 13 synonyms, described 10 new species, and confirmed 26 valid species of this genus. Thereafter, new species were described successively.



Feng and Zhang (2015) provided a checklist of 75 known species worldwide and described two new species. Yang et al. (2017) conducted a systematic morphological study of 88 *Atkinsoniella* species from China, including 33 new species, two Chinese new records, 12 new synonyms, and proposed *Curvufacies* Kuoh, 1993 as a new synonym of *Atkinsoniella*. Subsequently, 2 new species from China and Pakistan were described (Naveed and Zhang 2018; Jiang et al. 2022).

To date, 99 valid species were described worldwide, of which 89 species occurred in China, and a few were scattered in Bay of Bengal, Bhutan, India, Indonesia, Kingdom of Bhutan, Laos, Malay Islands, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Thailand, and Vietnam (Feng and Zhang 2015; Yang et al. 2017; Naveed and Zhang 2018; Jiang et al. 2022). In this study, the description, male genitalia and habitus photos of three new species, *A. stenopyga*, *A. wangi*, and *A. yingjiangensis* spp. nov. from Qinghai–Tibet Plateau (Tibet Autonomous Region) and Yunnan–Guizhou Plateau (Yunnan Province) of China are provided. The checklist of all known *Atkinsoniella* species worldwide and the three new species is updated.

## Material and methods

### Morphology

The specimens were collected by sweeping (27–35 sweeps per collecting event) on shrubs and weeds using 2.5 m insect sweep nets on day-light and off-set sun by using a 500W high-pressure mercury lamps; all materials were preserved in absolute ethanol and stored at -20 °C in the laboratory. The abdomens of specimens were detached and soaked in 10% NaOH solution, boiled for 1–3 min, rinsed with water to remove traces of NaOH, and transferred to glycerol for further dissection, photography and preservation. The habitus and male genitalia were photographed using a KEYENCE VHX-6000 digital camera and a Nikon Eclipse Ni-E microscope, respectively. Adobe Photoshop 2020 was used to edit compiled photos. The length of the body was measured from the vertex to the rear of the forewings using a KEYENCE VHX-6000 digital camera. The morphological terminology is adapted from Young (1968, 1986) and Yang et al. (2017). The holotype and paratypes were deposited at the Institute of Entomology, Guizhou University, Guiyang, China (GUGC).

## Results

### *Atkinsoniella* Distant, 1908

*Atkinsoniella* Distant, 1908: 235.

*Soibanga* Distant, 1908: 236.

*Curvufacies* Kuoh, 1993: 38.



**Type species.** *Atkinsoniella decisa* Distant, 1908.

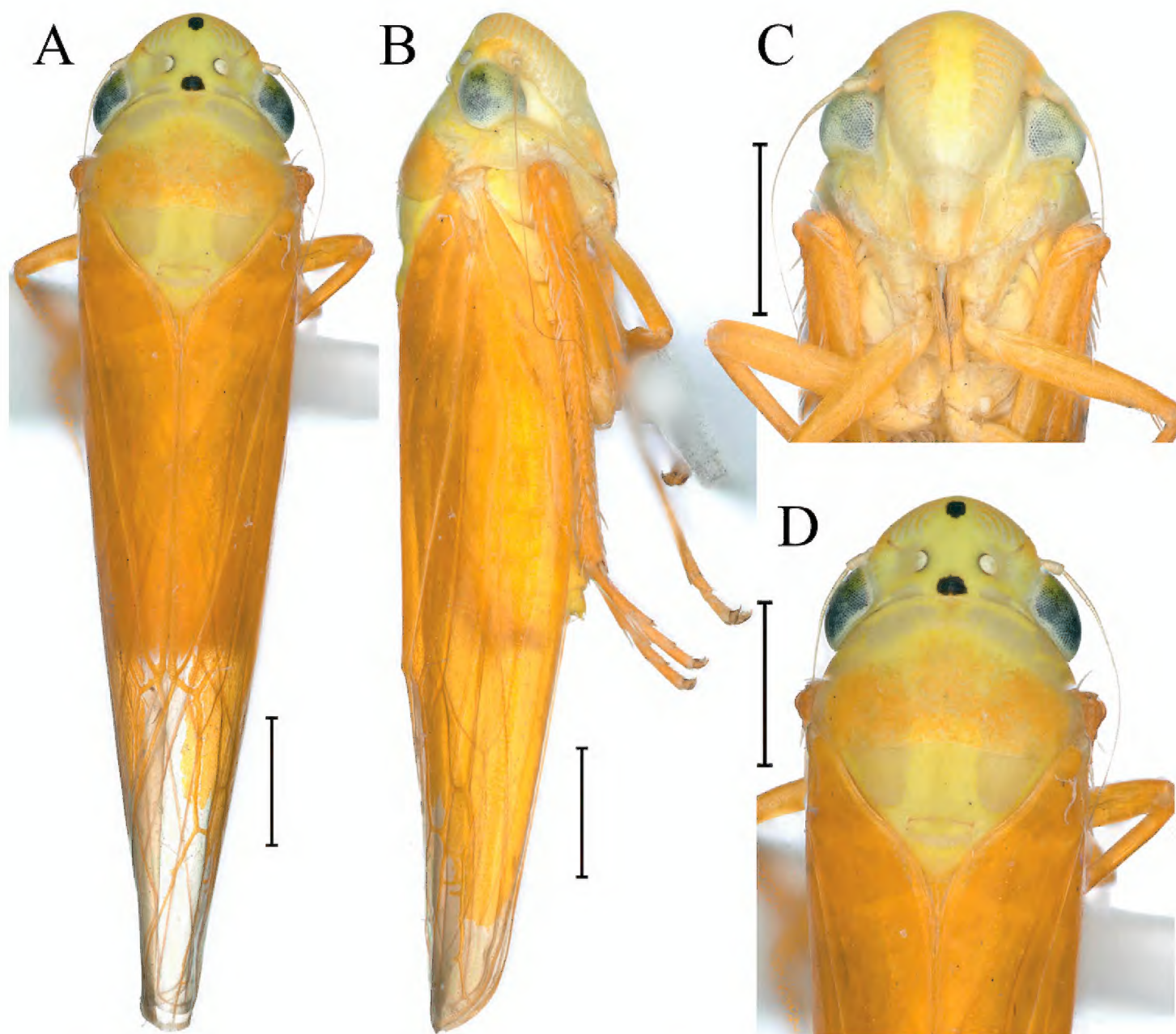
**Distribution.** Palaearctic, Oriental.

***Atkinsoniella stenopyga* Jiang & Yang, sp. nov.**

<https://zoobank.org/325305A3-840F-480C-B5CF-1F5FC86957C5>

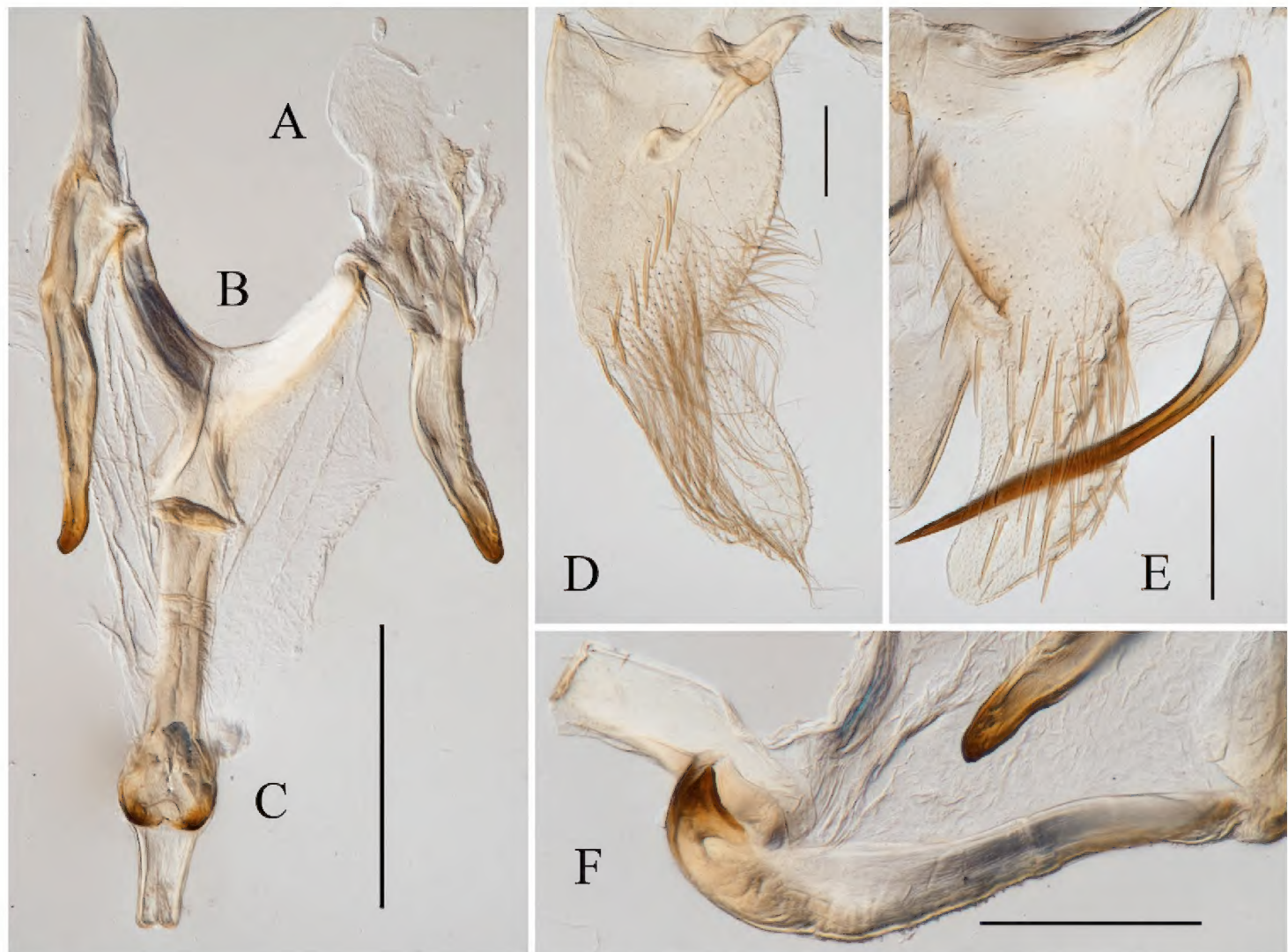
Figs 1A–D, 2A–F

**Description.** Crown and thorax canary yellow and greyish white in dorsal view; a small subcircular black spot at apex of head and basal margin medially, and interocular width 2× wider than long; eyes fuscus; ocelli greyish white with narrow black border; forewing light orange; face off-white, frontoclypeus median with a broad yellowish white longitudinal; thorax and abdomen yellowish white in ventral view; legs orangish with pretarsi black or dark brown.



**Figure 1.** External features of *Atkinsoniella stenopyga* Jiang & Yang, sp. nov., male holotype **A** habitus, dorsal view **B** habitus, lateral view **C** face, anterior view **D** head and pronotum, dorsal view. Scale bars: 1000 μm.





**Figure 2.** Male genitalia of *Atkinsoniella stenopyga* Jiang & Yang, sp. nov. **A** style **B** connective **C** aedeagus and paraphysis, ventral view **D** subgenital plate, ventral view **E** pygofer, lateral view **F** aedeagus and paraphysis, lateral view. Scale bars: 200  $\mu$ m.

Anterior margin of crown broadly rounded and convex, and median length of crown shorter than interocular width. Ocelli nearest to midline and posterior margin than eyes, lateral area concave, each ocellus further from the other than to the adjacent eye. Face with frontoclypeus flat medially; muscle impressions distinct and extend to the tip of crown; clypeal sulcus blurred in the median; anteclypeus longitudinally gibbous. Pronotum wider than head, anterior margin arcuately convex, posterior margin with medially concave. Scutellum with medial transverse depression. Forewings with distinct apical membranous area, base of second cells more proximal than third cells transversely.

Male pygofer narrowly rounded posteriorly and convex dorsally, posterior half long scoop-shaped with macrosetae; pygofer processes slender and strongly sclerosed, base broad with microsetae; bending dorsad from basal one-third and then extending straightly, tip acute and exceeding dorsal margin posteriorly of pygofer. Subgenital plates in ventral view convex and short with one row of macrosetae uniseriate obliquely, long dense mid microsetae, and posterior half with long and short microsetae dispersedly with apex rounded. Aedeagus stubby and straight, with posterior margin truncate and dorsal margin concave subbasally, one protuberance at base ventrally articulating with paraphysis, and concave at the articulation with paraphysis apically; paraphysis



long and thick, apical portion intumescent, apex bifurcated and articulating with aedeagus. Connective Y-shaped; style slender, with tip tapered and curved.

**Etymology.** The specific epithet is the combined noun of *stenos* and *tail* from Greek, *stenopyga*, referring a narrow pygofer shape.

**Measurement.** Length of male 7.8–8.0 mm.

**Material examined.** *Holotype*: ♂, Motuo, Tibet, CHINA, 18 August 2020, coll. Xian-Yi Wang. *Paratype*, 1♂, same data as holotype.

**Remarks.** This species is similar to *A. thaloidea* Young, 1986, *A. flavipenna* Li & Wang, 1992, *A. uniguttata* Li, 1993, and *A. bowa* Yang, Meng & Li, 2017 in appearance, but can be easily differentiated from these species by the following characteristics: (1) pygofer slender; (2) aedeagus stubby with posterior margin truncate; and (3) two pointed dentate protrusions at the apex of the paraphysis incurved dorsally and embracing.

**Distribution.** China (Tibet).

***Atkinsoniella wangi* Jiang & Yang, sp. nov.**

<https://zoobank.org/89195CDF-6EDC-4BF0-AEDB-A7508F9A9795>

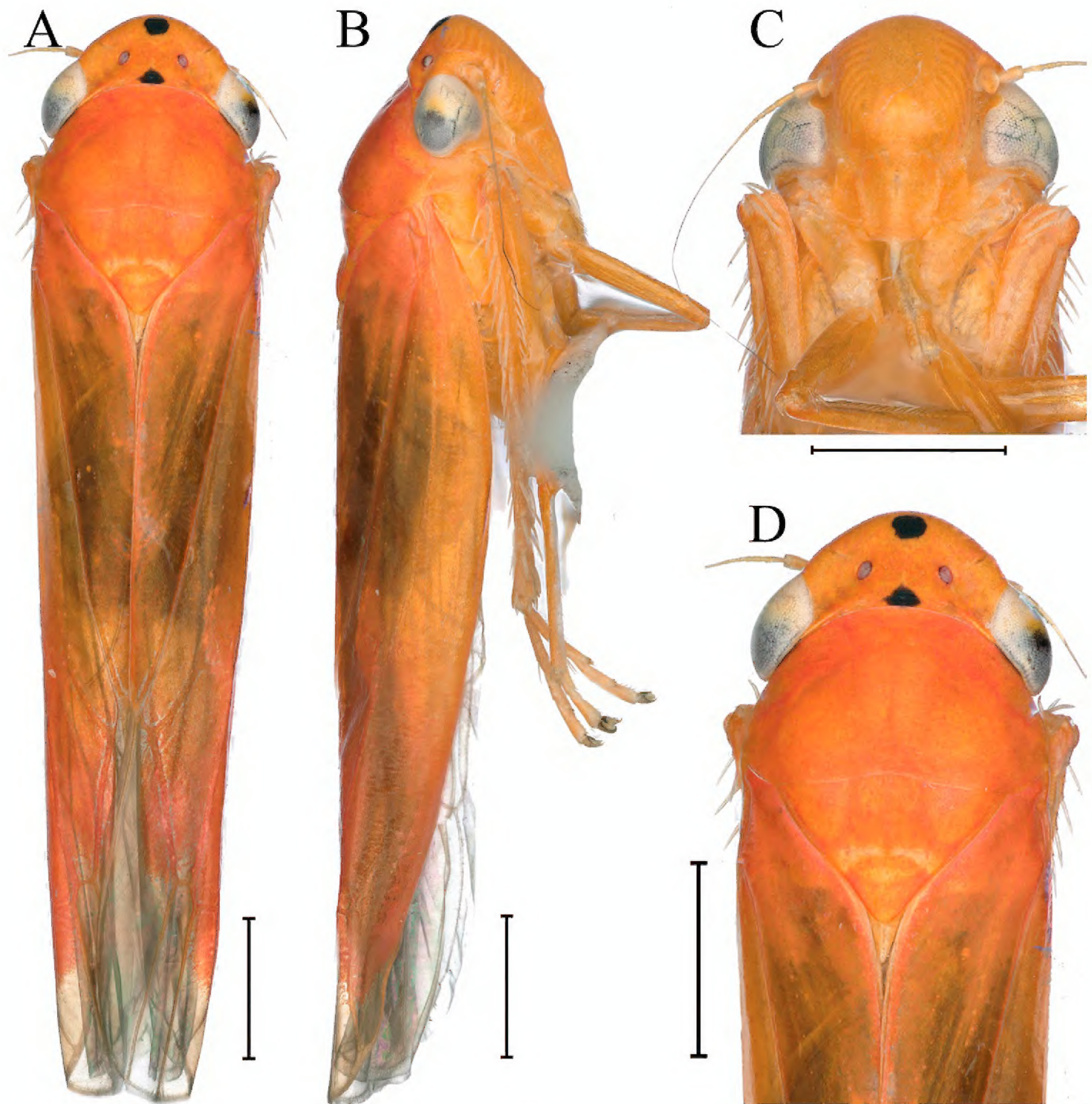
Figs 3A–D, 4A–F

**Description.** Crown, thorax and forewings orange in dorsal view; crown with a black spot at anterior margin medially and a smaller black spot at posterior margin medially; eyes off-white or dark brown; ocelli off-white with black border; forewings orange, with apical membranous area darker; face, thorax and abdomen in ventral view, legs orange.

Crown with anterior margin rounded prominently, and interocular width 2× wider than long. Ocelli nearest to midline and posterior margin than eyes, lateral area concave, each ocellus slightly further from the other one than to the adjacent eye. Face with a nodular protrusion in the center, frontoclypeus flat medially, muscle impressions distinct and extending to the tip of crown, clypeal sulcus distinct medially. Pronotum broader than head, anterior margin protruding roundly, posterior margin with medially concave. Scutellum convex anterior and posterior to transverse depression, with transverse depression arcuate, a large black spot near each basal angle in some specimens. Forewings with four apical cells, the base of the second cells more basal than third cells transversely, apical membranous area distinct.

Male pygofer slender, posterior portion tilted dorsad and posterior margin round, posterior half with macrosetae; pygofer process lamellate, base with several macrosetae, bending dorsad from basal one-third, posterior one-third portion lamellate broadly and tortile backward and apex acute. Subgenital plates broad at base, posterior half narrow and bent dorsally, one row of macrosetae uniseriate obliquely in the median, lateral area with long dense microsetae, apical half with short microsetae dispersedly. Aedeagus broad at base, posterior half constricted and tilted dorsad, tip swordlike, ventral margin protuberant at the articulation with the tip of paraphysis and concave subbasally; paraphysis dilated apically and constricted subapically, apex bifurcated and articulating with aedeagus. Connective V-shaped. Style wide at base and tapered at tip, apex acute.





**Figure 3.** External features of *Atkinsoniella wangi* Jiang & Yang, sp. nov., male holotype **A** habitus, dorsal view **B** habitus, lateral view **C** face, anterior view **D** head and pronotum, dorsal view. Scale bars: 1000  $\mu\text{m}$ .

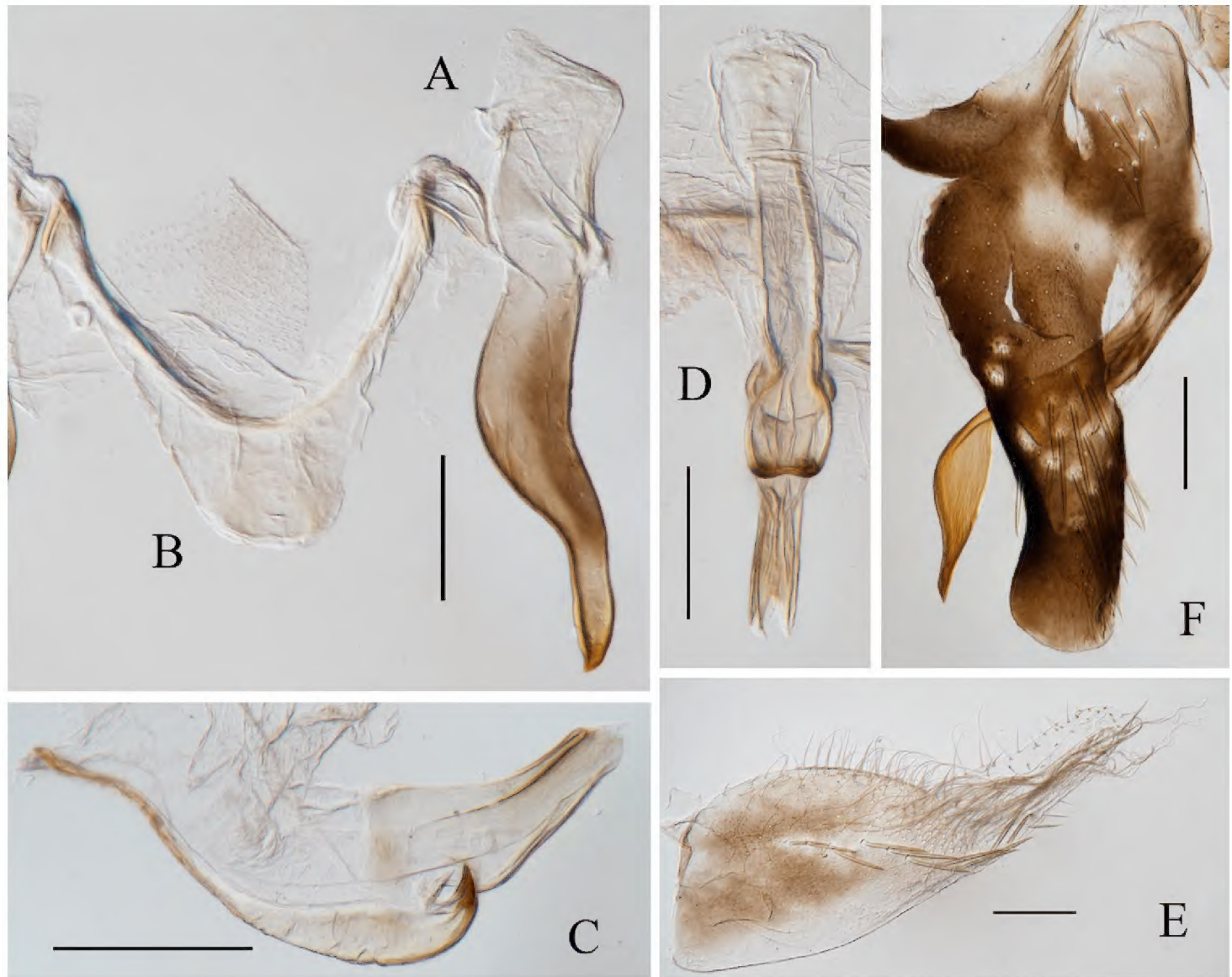
**Etymology.** The new species is named after the family name of collector Xian-Yi Wang.

**Measurement.** Length of male 7.9–8.0 mm.

**Material examined. Holotype:** ♂, Tongmai, Tibet, CHINA, 18 August 2020, coll. Xian-Yi Wang. **Paratypes**, 1♂ (light trapped) + 11♂♂, same data as holotype; 1♂, Tongmai, Tibet, China, 19 August 2020, light trapped, coll. Xian-Yi Wang.

**Remarks.** This species is similar to *A. curvata* Zhang & Kuoh in appearance and male genitalia, but can be distinguished from the latter by the following characteristics: (1) crown with a black spot in the median of the anterior margin, and the smaller black spot at the basal margin medially narrower than the width between the ocelli, but the latter only with a large V-shaped black spot below the ocelli; (2) pygofer of the





**Figure 4.** Male genitalia of *Atkinsoniella wangi* Jiang & Yang, sp. nov. **A** style **B** connective **C** aedeagus and paraphysis, lateral view **D** aedeagus and paraphysis, ventral view **E** subgenital plate, ventral view **F** pygofer, lateral view. Scale bars: 200  $\mu$ m.

new species slender overall, with posterior margin rounded, while pygofer of the latter slender at apical one-third, with the posterior margin truncate; (3) aedeagus of the new species tilted dorsally at the posterior half, while aedeagus of the latter straight overall; and (4) connective of the new species V-shaped, but connective of the latter Y-shaped.

**Distribution.** China (Tibet).

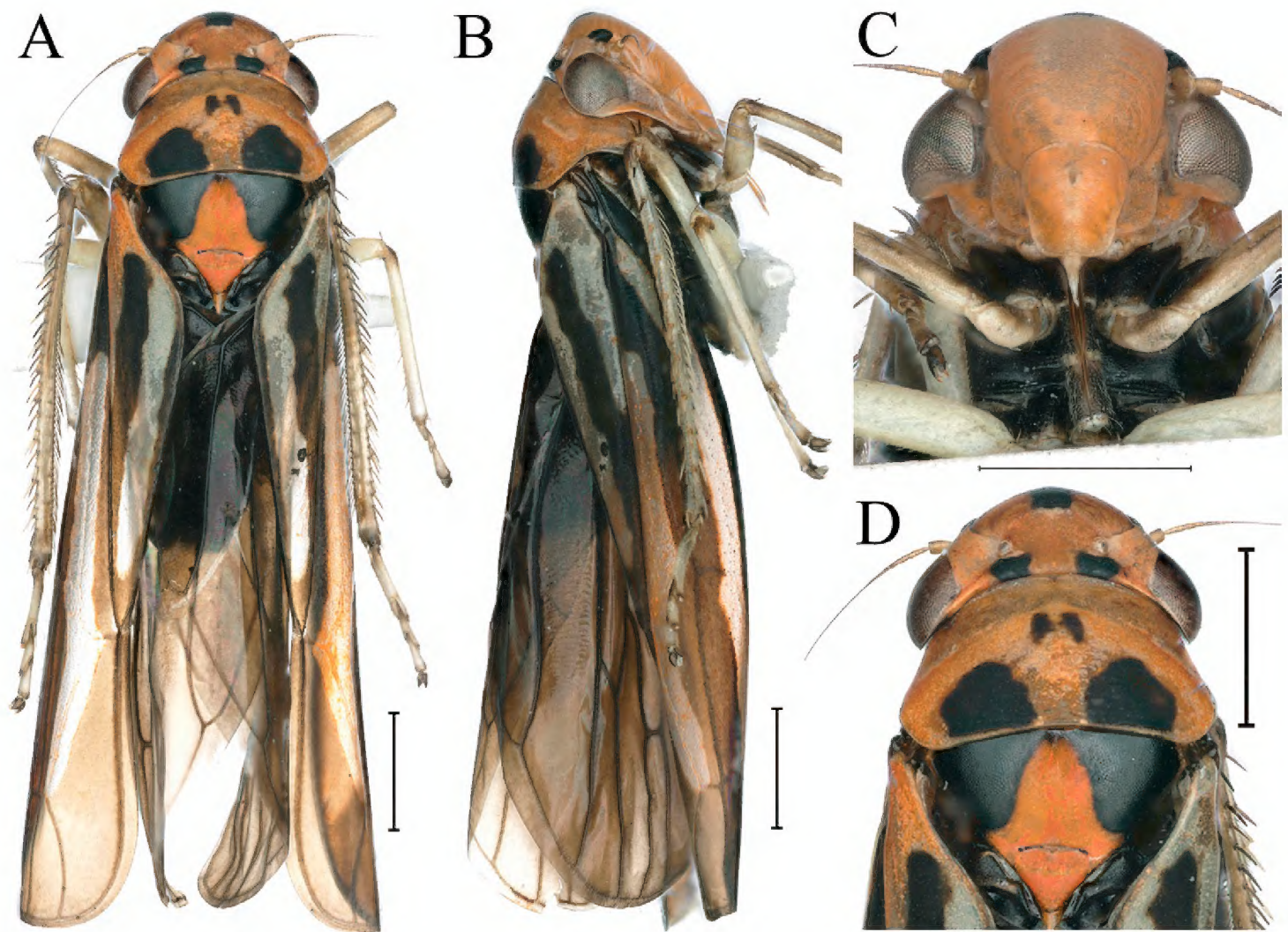
***Atkinsoniella yingjiangensis* Jiang & Yang, sp. nov.**

<https://zoobank.org/6FD2EA20-B2DA-442B-B50E-A35F91051243>

Figs 5A–D, 6A–G

**Description.** Head and thorax dark orange in dorsal view; crown with a black spot at the anterior margin medially, basal margin with a black spot below each ocellus, and lateral margin with a black spot anterior to each antennal ledge; eyes dark brown; ocelli gray; pronotum with two small black spots abreast in the center, and posterior area with two large black spots transversely; scutellum with a large triangular black spot at





**Figure 5.** External features of *Atkinsoniella yingjiangensis* Jiang & Yang, sp. nov., male holotype **A** habitus, dorsal view **B** habitus, lateral view **C** face, anterior view **D** head and pronotum, dorsal view. Scale bars: 1000  $\mu\text{m}$ .

each basal, and the base of the two spots linked; forewings black, with three longitudinal grayish white stripes, apical membranous area dark brown; face dark orange; thorax black in ventral view; legs grayish white.

Crown with anterior margin convex roundly, median length of crown approximately equal to half of interocular width, concave lateral area of ocelli. Ocelli located at the line of anterior eyes, each ocellus slightly further from the other one than to the adjacent eye. Face with frontoclypeus flat in the median, muscle impressions and clypeal sulcus distinct. Pronotum wider than head, anterior margin convex roundly and posterior margin concave. Scutellum with transverse depression slightly posterior to the median. Forewings with apical membranous area not obvious, base of the second and third cells almost aligned transversely.

Male pygofer narrowly rounded posteriorly, tip oblique dorsally, dorsal margin with lamellar prominence at basal one-third, with macrosetae in posterior half and microsetae in the median dispersedly; pygofer processes with microsetae at base, arising basiventrally on each side and extending dorsolateral posteriorly of pygofer, apex acute and exceeding posterior margin of pygofer. Subgenital plates broad at base and constrictive at tip, with one row of macrosetae uniseriate obliquely, long microsetae on lateral area, short microsetae on posterior half. Aedeagus slender, bent dorsally at tip and curved ventral, ventral margin with a horned protuberance basically articulating with paraphysis; paraphysis wide subapically,





**Figure 6.** Male genitalia of *Atkinsoniella yingjiangensis* Jiang & Yang, sp. nov. **A** style **B** connective **C** aedeagus and paraphysis, ventral view **D** aedeagus and paraphysis, lateral view **E** pygofer, lateral view **F** pygofer process, lateral view **G** subgenital plate, ventral view; Scale bars: 200  $\mu$ m.

with two lamellate bulges at tip, apex uncinat and articulating with aedeagus. Connective Y-shaped. Style narrow at posterior portion, apex curved and exceeding the tip of connective.

**Etymology.** The name of the new species is derived from Yingjiang where the type specimens were collected.

**Measurement.** Length of male 8.0–8.1 mm.

**Material examined.** *Holotype*: ♂, Yingjiang, Yunnan, CHINA, 25 June 2019, coll. Tie-Long Xu. *Paratypes*, 2♂♂, same data as holotype.

**Remarks.** This species is similar to *A. limba* Kuoh, 1991 in male genitalia, but markedly differ in the following characteristics: (1) pronotum with two small black spots abreast in the center and two large black spots transversely at posterior area; (2) apex of the pygofer process exceeding the posterior margin of the pygofer; (3) aedeagus concave obviously at the ventral margin basally; and (4) paraphysis inflated subapically and posterior margin  $\Lambda$ -shaped in ventral view.

**Distribution.** China (Yunnan).



## Checklist of the genus *Atkinsoniella* worldwide (updated from Yang et al. 2017)

### ***Atkinsoniella albimacula* Yang & Li, 2002**

*Atkinsoniella albimacula* Yang & Li, 2002a: 556.

**Distribution.** China (Yunnan).

### ***Atkinsoniella albipenna* Yang, Meng & Li, 2017**

*Atkinsoniella albipenna* Yang, Meng & Li, 2017: 219.

**Distribution.** China (Guangxi, Yunnan).

### ***Atkinsoniella alcmena* (Distant, 1908)**

*Tettigoniella alcmena* Distant, 1908: 219.

*Atkinsoniella alcmena* (Distant): Young, 1986: 96.

**Distribution.** China (Tibet), India.

### ***Atkinsoniella alternata* Young, 1986**

*Atkinsoniella alternata* Young, 1986: 100.

**Distribution.** China (Guizhou, Taiwan, Yunnan).

### ***Atkinsoniella angula* Kuoh, 1992**

*Atkinsoniella angula* Kuoh, 1992: 126.

**Distribution.** China (Gansu, Yunnan).

### ***Atkinsoniella anabella* Young, 1986**

*Atkinsoniella anabella* Young, 1986: 107.

**Distribution.** Bhutan, India, Nepal.

### ***Atkinsoniella atrata* Yang, Meng & Li, 2017**

*Atkinsoniella atrata* Yang, Meng & Li, 2017: 207.

**Distribution.** China (Yunnan).



***Atkinsoniella atronotata* (Distant, 1918)**

*Kolla atronotata* Distant, 1918: 10.

*Atkinsoniella atronotata* (Distant): Young, 1986: 96.

**Distribution.** India.

***Atkinsoniella aurantiaca* Cai & Kuoh, 1995**

*Atkinsoniella aurantiaca* Cai & Kuoh, 1995: 89.

**Distribution.** China (Guizhou, Hubei, Jiangxi, Yunnan, Zhejiang).

***Atkinsoniella beaka* Yang, Meng & Li, 2017**

*Atkinsoniella beaka* Yang, Meng & Li, 2017: 218.

**Distribution.** China (Yunnan).

***Atkinsoniella bella* (Walker, 1851)**

*Tettigonia bella* Walker, 1851: 778.

*Atkinsoniella bella* (Walker): Young, 1986: 96.

**Distribution.** India, Nepal.

***Atkinsoniella biundulata* Meng, Yang & Ni, 2010**

*Atkinsoniella biundulata* Meng, Yang & Ni, 2010: 42.

**Distribution.** China (Yunnan).

***Atkinsoniella bowa* Yang, Meng & Li, 2017**

*Atkinsoniella bowa* Yang, Meng & Li, 2017: 206.

**Distribution.** China (Yunnan).

***Atkinsoniella brevistyla* Yang & Li, 2004**

*Atkinsoniella brevistyla* Yang & Li, 2004: 757.

**Distribution.** China (Tibet, Yunnan).



***Atkinsoniella changae* Yang, Meng & Li, 2017**

*Atkinsoniella changae* Yang, Meng & Li, 2017: 240.

**Distribution.** China (Yunnan).

***Atkinsoniella contrariuscula* (Jacobi, 1944)**

*Cicadella contrariuscula* Jacobi, 1944: 44.

*Atkinsoniella contrariuscula* (Jacobi): Young, 1986: 97.

*Atkinsoniella furcata* Zhang & Kuoh, 1993: 15.

**Distribution.** China (Anhui, Fujian, Guangdong, Guangxi, Guizhou, Sichuan).

***Atkinsoniella curvata* Zhang & Kuoh, 1993**

*Atkinsoniella curvata* Zhang & Kuoh, 1993: 13.

**Distribution.** China (Tibet, Yunnan).

***Atkinsoniella cuspidata* Meng, Yang & Ni, 2010**

*Atkinsoniella cuspidata* Meng, Yang & Ni, 2010: 45.

**Distribution.** China (Yunnan).

***Atkinsoniella cyclops* (Melichar, 1914)**

*Tettigoniella cyclops* Melichar, 1914: 127.

*Atkinsoniella cyclops* (Melichar): Young, 1986: 97.

**Distribution.** China (Hainan, Yunnan), Indonesia, Nepal.

***Atkinsoniella dactylia* Yang & Li, 2000**

*Atkinsoniella dactylia* Yang & Li, 2000: 410.

*Atkinsoniella trinotata* Cai & He, 2002: 147.

**Distribution.** China (Fujian, Guangdong, Guangxi, Guizhou, Hainan, Jiangxi, Yunnan).

***Atkinsoniella decisa* Distant, 1908**

*Atkinsoniella decisa* Distant, 1908: 236.



**Distribution.** India.

***Atkinsoniella divaricata* Yang, Meng & Li, 2017**

*Atkinsoniella divaricata* Yang, Meng & Li, 2017: 205.

**Distribution.** China (Guangdong, Guangxi, Guizhou).

***Atkinsoniella dormana* Li, 1992**

*Atkinsoniella dormana* Li, 1992: 345.

**Distribution.** China (Chongqing, Fujian, Guizhou, Hubei, Jiangxi, Sichuan, Shaanxi, Yunnan).

***Atkinsoniella dubia* Young, 1986**

*Atkinsoniella dubia* Young, 1986: 104.

**Distribution.** China (Tibet), Bhutan.

***Atkinsoniella duna* Yang, Meng & Li, 2017**

*Atkinsoniella duna* Yang, Meng & Li, 2017: 236.

**Distribution.** China (Guizhou, Yunnan).

***Atkinsoniella expanda* Yang, Meng & Li, 2017**

*Atkinsoniella expanda* Yang, Meng & Li, 2017: 214.

**Distribution.** China (Yunnan).

***Atkinsoniella fishtaila* Yang, Meng & Li, 2017**

*Atkinsoniella fishtaila* Yang, Meng & Li, 2017: 221.

**Distribution.** China (Hubei).

***Atkinsoniella fistular* Naveed & Zhang, 2018**

*Atkinsoniella fistular* Naveed & Zhang, 2018: 286.

**Distribution.** Pakistan.



***Atkinsoniella flavilega* Yang, Meng & Li, 2017**

*Atkinsoniella flavilega* Yang, Meng & Li, 2017: 242.

**Distribution.** China (Yunnan).

***Atkinsoniella flavipenna* Li & Wang, 1992**

*Atkinsoniella flavipenna* Li & Wang, 1992: 95.

**Distribution.** China (Fujian, Hubei, Hunan, Guangdong, Guangxi, Guizhou, Sichuan).

***Atkinsoniella flexa* Kuoh, 1992**

*Atkinsoniella flexa* Kuoh, 1992: 127.

**Distribution.** China (Yunnan).

***Atkinsoniella furipygofera* Yang & Meng, 2011**

*Atkinsoniella furipygofera* Yang & Meng in Yang, Meng & Li, 2011: 765.

**Distribution.** China (Yunnan).

***Atkinsoniella fuscopenna* Yang & Li, 2004**

*Atkinsoniella fuscopenna* Yang & Li, 2004: 756.

**Distribution.** China (Tibet).

***Atkinsoniella goosenecka* Yang, Meng & Li, 2017**

*Atkinsoniella goosenecka* Yang, Meng & Li, 2017: 222.

**Distribution.** China (Chongqing, Sichuan).

***Atkinsoniella grahami* Young, 1986**

*Atkinsoniella grahami* Young, 1986: 105.

*Atkinsoniella nigroscuta* Zhang & Kuoh, 1993: 11.

*Atkinsoniella furcula* Yang & Li, 2002b: 40.

**Distribution.** China (Chongqing, Gansu, Guangdong, Guizhou, Hainan, Henan, Hubei, Hunan, Shaanxi, Sichuan, Yunnan).



***Atkinsoniella gregalis* (Distant, 1908)**

*Kolla gregalis* Distant, 1908: 226.

*Atkinsoniella gregalis* (Distant): Young, 1986: 97.

**Distribution.** India, Myanmar.

***Atkinsoniella guttata* Kuoh, 1992**

*Atkinsoniella guttata* Kuoh, 1992: 125.

**Distribution.** China (Yunnan, Tibet).

***Atkinsoniella heae* Yang, Meng & Li, 2017**

*Atkinsoniella heae* Yang, Meng & Li, 2017: 238.

**Distribution.** China (Tibet).

***Atkinsoniella heiyuana* Li, 1992**

*Atkinsoniella heiyuana* Li, 1992: 348.

*Atkinsoniella rubra* Kuoh & Cai in Cai & Kuoh, 1994: 14.

**Distribution.** China (Chongqing, Gansu, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangxi, Shaanxi, Sichuan, Tibet, Yunnan), Vietnam.

***Atkinsoniella huangi* Yang & Zhang, 2000**

*Atkinsoniella huangi* Yang & Zhang, 2000: 187.

**Distribution.** China (Guizhou, Sichuan, Yunnan).

***Atkinsoniella hupehna* Young, 1986**

*Atkinsoniella hupehna* Young, 1986: 118.

*Atkinsoniella obliqua* Zhang & Kuoh, 1993: 14.

**Distribution.** China (Chongqing, Fujian, Guangxi, Guizhou, Hubei, Jiangxi, Shaanxi, Zhejiang).



***Atkinsoniella insignata* (Haupt, 1924)**

*Tettigonia trilineata* Melichar, 1902: 132.

*Tettigoniella trilineata insignata* Haupt, 1924: 306.

*Tettigella chinensis* Metcalf, 1955: 264.

*Atkinsoniella insignata* (Haupt): Young, 1986: 97.

*Atkinsoniella longinotata* Kuoh, 1992: 124.

**Distribution.** China (Hubei, Qinghai, Sichuan, Yunnan).

***Atkinsoniella javana* (Melichar, 1914)**

*Kolla javana* Melichar, 1914: 124.

*Atkinsoniella javana* (Melichar): Young, 1986: 97.

**Distribution.** Indonesia.

***Atkinsoniella jini* Yang, Meng & Li, 2017**

*Atkinsoniella jini* Yang, Meng & Li, 2017: 199.

**Distribution.** China (Tibet).

***Atkinsoniella latior* Young, 1986**

*Atkinsoniella latior* Young, 1986: 113.

**Distribution.** China (Guangdong, Guangxi, Hubei, Jiangxi).

***Atkinsoniella lii* Yang & Zhang, 2000**

*Atkinsoniella lii* Yang & Zhang, 2000: 186.

**Distribution.** China (Yunnan).

***Atkinsoniella limba* Kuoh, 1991**

*Atkinsoniella limba* Kuoh, 1991: 20.

**Distribution.** China (Fujian).



***Atkinsoniella liui* Yang, Meng & Li, 2017**

*Atkinsoniella liui* Yang, Meng & Li, 2017: 241.

**Distribution.** China (Tibet).

***Atkinsoniella longa* Yang, Meng & Li, 2017**

*Atkinsoniella longa* Yang, Meng & Li, 2017: 212.

**Distribution.** China (Yunnan).

***Atkinsoniella longiaurita* Yang, Meng & Li, 2017**

*Atkinsoniella longiaurita* Yang, Meng & Li, 2017: 202.

**Distribution.** China (Yunnan).

***Atkinsoniella longiuscula* Feng & Zhang, 2015**

*Atkinsoniella longiuscula* Feng & Zhang, 2015: 281.

**Distribution.** China (Sichuan, Yunnan).

***Atkinsoniella malaisei* Young, 1986**

*Atkinsoniella malaisei* Young, 1986: 102.

**Distribution.** China (Yunnan), Myanmar.

***Atkinsoniella mediofasciola* Yang & Li, 2002**

*Atkinsoniella mediofasciola* Yang & Li, 2002b: 40.

**Distribution.** China (Chongqing, Fujian, Guangxi, Sichuan).

***Atkinsoniella membrana* Yang, Meng & Li, 2017**

*Atkinsoniella membrana* Yang, Meng & Li, 2017: 213.

**Distribution.** China (Yunnan).



***Atkinsoniella motuoensis* Meng, Yang & Ni, 2010**

*Atkinsoniella motuoensis* Meng, Yang & Ni, 2010: 47.

**Distribution.** China (Tibet).

***Atkinsoniella multiseta* Yang, Meng & Li, 2017**

*Atkinsoniella multiseta* Yang, Meng & Li, 2017: 226.

**Distribution.** China (Yunnan).

***Atkinsoniella mungphuensis* (Distant, 1908)**

*Kolla mungphuensis* Distant, 1908: 225.

*Atkinsoniella mungphuensis* (Distant): Young, 1986: 97.

**Distribution.** India, Myanmar.

***Atkinsoniella stenopyga* Jiang & Yang, sp. nov.**

**Distribution.** China (Tibet).

***Atkinsoniella nigra* Kuoh & Cai, 1994**

*Atkinsoniella nigra* Kuoh & Cai in Cai & Kuoh, 1994: 13.

**Distribution.** China (Yunnan).

***Atkinsoniella nigricephala* Li, 1992**

*Atkinsoniella nigricephala* Li, 1992: 349.

**Distribution.** China (Guizhou, Hubei, Zhejiang).

***Atkinsoniella nigradorsum* Kuoh & Zhuo, 1996**

*Atkinsoniella nigradorsum* Kuoh & Zhuo, 1996: 2.

**Distribution.** China (Chongqing, Fujian, Guizhou, Hubei, Sichuan, Zhejiang).

***Atkinsoniella nigripennis* Yang & Li, 1999**

*Atkinsoniella nigripennis* Yang & Li, 1999: 2.

**Distribution.** China (Yunnan).

***Atkinsoniella nigriscens* Yang & Li, 2004**

*Atkinsoniella nigriscens* Yang & Li, 2004: 756.

**Distribution.** China (Yunnan, Tibet).

***Atkinsoniella nigrisigna* Li, 1992**

*Atkinsoniella nigrisigna* Li, 1992: 344.

*Atkinsoniella chloritta* Yang & Li, 2002a: 558.

**Distribution.** China (Chongqing, Guangxi, Guizhou, Hubei, Sichuan, Yunnan).

***Atkinsoniella nigrita* Zhang & Kuoh, 1993**

*Atkinsoniella nigrita* Zhang & Kuoh, 1993: 12.

*Atkinsoniella bimanculata* Cai & Shen, 1998: 43.

**Distribution.** China (Chongqing, Gansu, Henan, Hubei, Sichuan, Shaanxi, Zhejiang).

***Atkinsoniella nigrominiatula* (Jacobi, 1944)**

*Cicadella nigrominiatula* Jacobi, 1944: 44.

*Atkinsoniella nigrominiatula* (Jacobi): Young, 1986: 97.

**Distribution.** China (Chongqing, Fujian, Gansu, Guangxi, Guizhou, Hubei, Jiangxi, Sichuan, Zhejiang).

***Atkinsoniella nigrosteaka* Li & Wang, 1994**

*Atkinsoniella nigrosteaka* Li & Wang, 1994: 27.

**Distribution.** China (Tibet).



***Atkinsoniella opponens* (Walker, 1851)**

*Tettigonia opponens* Walker, 1851: 757.

*Tettigoniella bellona* Distant, 1908: 212.

*Tettigoniella marpessa* Distant, 1908: 215.

*Kolla canidia* Distant, 1908: 226.

*Kolla maculifrons* Schmidt, 1911: 295.

*Kolla maculifrons similis* Schmidt, 1911: 296.

*Kolla trimaculata* Schmidt, 1911: 297.

*Tettigoniella cuprea* Melichar, 1914: 128.

*Kolla tigrina* Distant, 1918: 9.

*Kolla melichari* China, 1935: 305.

*Atkinsoniella opponens* (Walker): Young, 1986: 97.

*Atkinsoniella triguttata* Zhang & Kuoh, 1993: 9.

**Distribution.** China (Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Jiangxi, Sichuan, Yunnan), India, Indonesia, Laos, Malay Islands, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Thailand, Vietnam.

***Atkinsoniella peaka* Yang, Meng & Li, 2017**

*Atkinsoniella peaka* Yang, Meng & Li, 2017: 237.

**Distribution.** China (Jiangxi).

***Atkinsoniella punica* Yang & Li, 2002**

*Atkinsoniella punica* Yang & Li, 2002a: 556.

**Distribution.** China (Yunnan).

***Atkinsoniella recta* Yang, Meng & Li, 2017**

*Atkinsoniella recta* Yang, Meng & Li, 2017: 209.

**Distribution.** China (Yunnan).

***Atkinsoniella rectangulata* Yang, Meng & Li, 2017**

*Atkinsoniella rectangulata* Yang, Meng & Li, 2017: 210.

**Distribution.** China (Yunnan).

***Atkinsoniella rhomboida* Yang, Meng & Li, 2017**

*Atkinsoniella rhomboida* Yang, Meng & Li, 2017: 216.

**Distribution.** China (Yunnan).

***Atkinsoniella rinkihonis* (Matsumura, 1912)**

*Tettigonia rinkihonis* Matsumura, 1912: 36.

*Atkinsoniella rinkihonis* (Matsumura): Young, 1986: 97.

*Curvufacies sordidula* Kuoh, 1993: 39.

*Atkinsoniella tylata* Yang & Li, 1999: 1.

**Distribution.** China (Fujian, Guangxi, Guizhou, Jiangxi, Sichuan, Taiwan).

***Atkinsoniella rubrostriata* Kuoh, 1992**

*Atkinsoniella rubrostriata* Kuoh, 1992: 123.

**Distribution.** China (Yunnan).

***Atkinsoniella rufistigma* Yang, Meng & Li, 2017**

*Atkinsoniella rufistigma* Yang, Meng & Li, 2017: 233.

**Distribution.** China (Yunnan).

***Atkinsoniella steelei* Young, 1986**

*Atkinsoniella steelei* Young, 1986: 109.

**Distribution.** India.

***Atkinsoniella sulphurata* (Distant, 1908)**

*Tettigoniella sulphurata* Distant, 1908: 216.

*Atkinsoniella maculata* Distant, 1908: 236.

*Bhandara tetraspila* Jacobi, 1944: 41.

*Atkinsoniella sulphurata* (Distant): Young, 1986: 97.

*Atkinsoniella tetramaculata* Zhang & Kuoh, 1993: 7.

*Atkinsoniella stigma* Zhang & Kuoh, 1993: 8.

**Distribution.** China (Chongqing, Fujian, Guangxi, Guizhou, Hubei, Hunan, Sichuan, Yunnan, Zhejiang), India, Indonesia, Myanmar.



***Atkinsoniella thalia* (Distant, 1918)**

*Tettigoniella thalia* Distant, 1918: 2.

*Atkinsoniella thalia* (Distant): Young, 1986: 97.

*Atkinsoniella rubrivenosa* Kuoh & Zhuo, 1996: 3.

**Distribution.** China (Anhui, Chongqing, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangxi, Shaanxi, Sichuan, Tibet, Yunnan, Zhejiang), Bay of Bengal, India, Myanmar, Pakistan, Thailand.

***Atkinsoniella thaloidea* Young, 1986**

*Atkinsoniella thaloidea* Young, 1986: 117.

**Distribution.** China (Guangdong, Guangxi, Guizhou, Hainan, Tibet, Yunnan), Myanmar.

***Atkinsoniella tiani* Yang, Meng & Li, 2017**

*Atkinsoniella tiani* Yang, Meng & Li, 2017: 230.

**Distribution.** China (Yunnan).

***Atkinsoniella transifasciata* Yang, Meng & Li, 2017**

*Atkinsoniella transifasciata* Yang, Meng & Li, 2017: 215.

**Distribution.** China (Yunnan).

***Atkinsoniella tridentata* Yang & Li, 2011**

*Atkinsoniella tridentata* Yang & Li in Yang, Meng & Li, 2011: 766.

**Distribution.** China (Yunnan).

***Atkinsoniella tripunctata* Dmitriev, 2020**

= *Atkinsoniella trimaculata* Li, 1992: 347.

*Atkinsoniella tripunctata* Dmitriev, 2020: 7.

**Distribution.** China (Guizhou, Sichuan, Yunnan).

***Atkinsoniella tuberostyla* Yang, Meng & Li, 2017**

*Atkinsoniella tuberostyla* Yang, Meng & Li, 2017: 225.

**Distribution.** China (Yunnan).

***Atkinsoniella uniguttata* Li, 1993**

*Atkinsoniella uniguttata* Li, 1993: 40.

*Atkinsoniella valida* Feng & Zhang, 2015: 283.

**Distribution.** China (Fujian, Guangxi, Guizhou, Hainan, Yunnan).

***Atkinsoniella variata* Young, 1986**

*Atkinsoniella variata* Young, 1986: 110.

**Distribution.** China (Guizhou, Sichuan, Tibet, Yunnan), Nepal.

***Atkinsoniella vesta* (Distant, 1908)**

*Kolla vesta* Distant, 1908: 224.

*Atkinsoniella vesta* (Distant): Young, 1986: 97.

**Distribution.** India, Pakistan.

***Atkinsoniella wangi* Jiang & Yang, sp. nov.**

**Distribution.** China (Tibet).

***Atkinsoniella warpa* Yang, Meng & Li, 2017**

*Atkinsoniella warpa* Yang, Meng & Li, 2017: 203.

**Distribution.** China (Tibet, Yunnan).

***Atkinsoniella wui* Yang, Meng & Li, 2017**

*Atkinsoniella wui* Yang, Meng & Li, 2017: 200.

**Distribution.** China (Tibet, Yunnan).



***Atkinsoniella xanthoabdomena* Yang, Meng & Li, 2017**

*Atkinsoniella xanthoabdomena* Yang, Meng & Li, 2017: 232.

**Distribution.** China (Yunnan).

***Atkinsoniella xanthonota* Kuoh, 1994**

*Atkinsoniella xanthonota* Kuoh in Cai & Kuoh, 1994: 12.

**Distribution.** China (Yunnan).

***Atkinsoniella xanthovena* Yang & Li, 2002**

*Atkinsoniella xanthovena* Yang & Li, 2002c: 176.

**Distribution.** China (Jiangxi, Fujian, Hainan, Guangxi, Guizhou, Yunnan).

***Atkinsoniella xanthovitta* Kuoh, 1994**

*Atkinsoniella xanthovitta* Kuoh in Cai & Kuoh, 1994: 11.

**Distribution.** China (Yunnan).

***Atkinsoniella xinfengi* Yang, Meng & Li, 2017**

*Atkinsoniella xinfengi* Yang, Meng & Li, 2017: 223.

**Distribution.** China (Yunnan).

***Atkinsoniella yani* Yang, Meng & Li, 2017**

*Atkinsoniella yani* Yang, Meng & Li, 2017: 235.

**Distribution.** China (Yunnan).

***Atkinsoniella yingjiangensis* Jiang & Yang, sp. nov.**

**Distribution.** China (Yunnan).

***Atkinsoniella yunnanana* Yang, Meng & Li, 2017**

*Atkinsoniella yunnanana* Yang, Meng & Li, 2017: 229.

**Distribution.** China (Yunnan).

***Atkinsoniella zaihuai* Yang & Meng, 2011**

*Atkinsoniella zaihuai* Yang & Meng in Yang, Meng & Li, 2011: 766.

**Distribution.** China (Yunnan).

***Atkinsoniella zhangmuensis* Yang, Meng & Li, 2017**

*Atkinsoniella zhangmuensis* Yang, Meng & Li, 2017: 227.

**Distribution.** China (Tibet).

***Atkinsoniella zizhong* Jiang & Yang, 2022**

*Atkinsoniella zizhong* Jiang & Yang in Jiang, Li, Yu & Yang, 2022: 5

**Distribution.** China (Hubei, Guizhou, Zhejiang).

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## References

- Cai P, He JH (2002) Homoptera: Cicadelloidea: Cicadellidae. In: Huang FS (Ed.) Forestry Insects from Hainan. Science Press, Beijing, 134–157. [In Chinese]
- Cai P, Kuoh CL (1994) Five new species and a new record of the genus *Atkinsoniella* from Yunnan, China (Homoptera: Cicadelloidea: Cicadellidae). Zoological Research 15(4): 11–19. [In Chinese]
- Cai P, Kuoh CL (1995) Homoptera: Ledridae, Cicadellidae, Iassidae and Coelidiidae. In: Wu H (Ed.) Insects of Baishanzu Mountain, Eastern China. Series of the Bioresources Expedition to the Baishanzu Mountain Nature Reserve. China Forestry Publishing House, Beijing, 86–94. [In Chinese]
- Cai P, Shen XC (1998) New species of family Cicadellidae from Mt. Funiu in Henan (Homoptera: Cicadelloidea). Fauna and Taxonomy of Insects in Henan 2: 37–52. [In Chinese]



- China WE (1935) The terrestrial Hemiptera of the German Limnological Sunda-Expedition. *Tropische Binnengewasser* 6: 295–307.
- Distant WL (1908) The Fauna of British India Including Ceylon and Burma: Rhynchota. Vol. IV. Homoptera and Appendix (Pt.). Taylor and Francis, London, 501 pp.
- Distant WL (1918) Rhynchota. Homoptera: Appendix. Heteroptera: addenda. The Fauna of British India. Including Ceylon and Burma 7: 1–210. [Published under the authority of the Secretary of State for India in Council]
- Dmitriev DA (2020) Nomenclatural changes in the suborders Auchenorrhyncha (Hemiptera) and Paleorrhyncha (Palaeohemiptera). *Zootaxa* 4881(1): 25–53. <https://doi.org/10.11646/zootaxa.4881.1.2>
- Feng L, Zhang Y (2015) The leafhopper genus *Atkinsoniella* Distant (Hemiptera: Cicadellidae: Cicadellinae) with descriptions of two new species from China. *Zootaxa* 4028: 274–286. <https://doi.org/10.11646/zootaxa.4028.2.7>
- Haupt H (1924) Die Homoptera der Tibetreise W. Stötzners. *Deutsche Entomologische Zeitschrift* 1923: 295–306. <https://doi.org/10.1002/mmnd.48019230313>
- Jacobi A (1944) Die Zikadenfauna der Provinz Fukien in Südchina und ihre tiergeographischen Beziehungen. *Mitteilungen der Münchener Entomologischen Gesellschaft* 34: 5–66.
- Jiang Y, Li HX, Yu XF, Yang MF (2022) Description and complete mitochondrial genome of *Atkinsoniella zizhongii* sp. nov. (Hemiptera: Cicadellidae: Cicadellinae) from China and its phylogenetic implications. *PeerJ* 10: e14026. <https://doi.org/10.7717/peerj.14026>
- Kuoh CL (1991) Five new species of Cicadellidae from Fujian (Homoptera: Cicadelloidea). *Wuyi Science Journal* 8: 15–22. [In Chinese]
- Kuoh CL (1992) Five new species of *Atkinsoniella* Distant from China (Homoptera: Cicadellidae). *Journal of Anhui Agricultural College* 19(2): 123–129. [In Chinese]
- Kuoh CL (1993) A new genus and a new species of Cicadellidae (Homoptera: Cicadelloidea). *Acta Zoologica Sinica* 39(1): 38–40. [In Chinese]
- Kuoh CL, Zhuo WX (1996) A new record genus and three new species of Cicadellidae from Fujian of China (Homoptera: Cicadelloidea). *Entomological Journal of East China* 5(1): 1–5. [In Chinese]
- Li ZZ (1992) Five new species of the genus *Atkinsoniella* from China (Homoptera: Tettigellidae). *Acta Zootaxonomica Sinica* 17(3): 344–351. [In Chinese]
- Li ZZ (1993) A new species of *Atkinsoniella* from Yunnan (Homoptera: Tettigellinae). *Journal of Guizhou Agricultural College* 12(Supplement): 40–41. [In Chinese]
- Li ZZ, Wang LM (1992) Agriculture and Forestry Insect Fauna of Guizhou (Homoptera: Cicadellidae) Vol. 4. Guizhou Science and Technology Publishing House, Guiyang, 304 pp.
- Li ZZ, Wang BH (1994) A new species of *Atkinsoniella* from Xizang (Homoptera: Tettigellinae). *Journal of Guizhou Agricultural College* 13(3): 27–28. [In Chinese]
- Matsumura S (1912) Die Cicadinen Japans II. *Annotationes Zoologicae Japonenses* 8: 15–51.
- Melichar L (1902) Homoptera aus West China, Persien, und dem Süd-Ussuri-Gebiete. *Annuaire du Musée Zoologique de l'Académie Impériale des Sciences de St.-Petersbourg* 7: 76–146.
- Melichar L (1914) Homopteren von Java, gesammelt von Herrn Ewd Jacobson. *Leyden Museum Notes* 36: 91–147.

- Meng ZH, Yang MF, Ni JQ (2010) Three new species of *Atkinsoniella* from China (Hemiptera: Cicadellidae: Cicadellini). *Zootaxa* 2654(1): 41–51. <https://doi.org/10.11646/zootaxa.2654.1.4>
- Naveed H, Zhang YL (2018) Newly recorded leafhoppers of the subfamily Cicadellinae (Hemiptera: Cicadellidae) with description of a new species from Pakistan. *Zootaxa* 4504(2): 285–295. <https://doi.org/10.11646/zootaxa.4504.2.9>
- Yang MF, Meng ZH, Li ZZ (2011) Three new species of the genus *Atkinsoniella* (Homoptera, Cicadellidae, Cicadellinae). *Acta Zootaxonomica Sinica* 36(3): 765–771. [In Chinese]
- Yang MF, Meng ZH, Li ZZ (2017) Hemiptera: Cicadellidae (II): Cicadellinae. *Fauna Sinica: Insecta*. Vol. 67. Science Press, Beijing, China, 637 pp. [In Chinese]
- Young DA (1968) Taxonomic study of the Cicadellinae (Homoptera: Cicadellidae), Part 1, Proconiini. *Bulletin - United States National Museum* 261: 1–287. <https://doi.org/10.5962/bhl.part.20869>
- Young DA (1986) Taxonomic study of the Cicadellinae (Homoptera: Cicadellidae), Part 3, Old World Cicadellini. *Bulletin of the North Carolina Agricultural Experimental Station* 281: 1–639.
- Zhang ZM, Kuoh CL (1993) Eight new species and a new record species of the genus *Atkinsoniella* from China (Homoptera: Cicadellidae). *Journal of Anhui Agricultural University* 20(1): 7–17. [In Chinese]